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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/528,028	03/17/2000	Min-Seok Jang	0630-1060P	4328

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EXAMINER
HOANG, PHUONG N

ART UNIT	PAPER NUMBER
2126	7

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/528,028	JANG, MIN-SEOK	
	Examiner	Art Unit	
	Phuong N. Hoang	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1 – 5, 8 – 13, and 15 - 16 rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (APA) and in view of Joel A. Farrell, U.S. patent no. 5,247,675.

As to claim 1, the APA teaches event transfer system (p. 2, lines 19 – 20), kernel (p. 2, lines 19 – 20), priority-based preemptive scheduling (p. 1, line 25), multitasking environment/plurality of tasks (task 1- 4, p. 2), call a kernel (kernel, p. 3 lines 7 – 8), receiving an event (receive event, p. 2 line 22 – p. 3 line 15), the tasks are blocked (tasks 3 and 4 are blocked, p. 3 lines 15 – 18), waiting-list (waiting-list, p. 3 lines 15 – 18).

However, the APA does not teach the tasks are inserted into a waiting list in a higher priority order, and the task having the highest priority in the waiting list obtains the event, is woke up, and resumed execution.

Farrell teaches the tasks are inserted into a waiting list (run list 32, col. 4 lines 27 – col. 5 line 46) in a higher priority order (thread are arranged in priority

order, col. 5 lines 39 – 45), and the task having highest priority (highest priority, col. 4 lines 37 – 60) in the waiting list obtains the event, is woke up (unsuspended, col. 4 lines 37 – 60), and resumed execution (execution, col. 4 lines 37 – 60).

It would have been obvious to apply the teaching of Farrell to the APA's system because it optimizes the execution of threads and influences execution the schedule.

As to claim 2, Farrell teaches the task having the highest priority is arranged at the most leading portion (threads are arranged in priority order on the run list 32, col. 4 lines 27 – col. 5 line 46).

It would have been obvious to apply the teaching of Farrell to the APA's system because it optimizes the execution of threads and influences execution of scheduling.

As to claim 3, the APA teaches the receiving event starts (task 2 start to execute, p. 3 lines 8 – 14), check whether there is an event value already sent (it checks and knows that the first task transfers no event yet, p. 3 lines 8 – 14).

As to claim 4 and 12, the APA teaches if the event value exists, the event value is obtained from the event control block buffer (receive event from the control block buffer, p. 3 lines 1 – 2), and as modified by the APA, the task is executing by sort of the event (see claim 1 above).

As to claim 5 and 13, the APA teaches when the event value does not exist (the current task is blocked and queued into the waiting list (tasks 2 – 4 are blocked and queued into the waiting list, p.3 lines 1 – 18).

As to claim 8, Farrell teaches when it is checked whether the waiting task exists (determines if the thread is already on the run list, col. 6 lines 15 – 20).

It would have been obvious to apply the teaching of Farrell to the APA's system because it optimizes the execution of threads.

As to claim 9 and 15, the APA teaches when the waiting task does not exist, an event value is stored in the event control block (queued into the event control block, p. 3 lines 10 –15).

As to claim 10, Farrell teaches when the waiting task exists, an event value is transferred to the head task (the current thread is a highest priority on the run list, col. 5 lines 15 – 47).

It would have been obvious to apply the teaching of Farrell to the APA's system because it makes sure the highest priority always run first.

As to claim 11, Farrell teaches the head task is inserted into the ready list (it is unblocked and unsuspended for ready to run, col. 5 lines 20 – 25), and the routine by sort of the event is executed (executing, col. 5 lines 20 – 30).

It would have been obvious to apply the teaching of Farrell to the APA's system because it makes sure the highest priority always run first.

As to claim 16, see claim 10 for rejection.

2. Claims 6, 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (APA), Joel A. Farrell, U.S. patent no. 5,247,675, and further in view of Thomas E. Saulpaugh, U.S. patent no. 5,734,903.

As to claim 6 and 14, Saulpaugh teaches event ID (message ID, col. 23 lines 45 – 55) generating error code in case of invalidity (invalid ID error, col. 23 lines 45 – 55).

It would have been obvious to apply the teaching of Saulpaugh to the APA's system because it only transfers the valid data.

As to claim 7, Saulpaugh teaches timeout option (timeout, col. 23, lines 1 – 3).

It would have been obvious to apply the teaching of Saulpaugh to the APA's system because the scheduler knows when to stop running.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (703) 605-4239. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alvin Oberley can be reached on (703)305-9716. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-7239 for regular communications and (703)746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)746-7140.

ph
November 22, 2002

ALVIN OBERLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100